

SEQUENCE LISTING

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<110> Elan Corporation
O'Mahony, Daniel J.

<120> RETRO-INVERSION PEPTIDES THAT TARGET GIT TRANSPORT RECEPTORS AND
RELATED METHODS

<130> 99.1064.US/E1067/20019

<140> US 09/443,986

<141> 1999-11-19

<160> 85

<170> PatentIn version 3.1

<210> 1

<211> 15

<212> PRT

<213> Artificial

<220>

<223> PAX2 15 mer fragment-D form retroinversion

<400> 1

Arg	Thr	Arg	Leu	Arg	Arg	Asn	His	Ser	Ser	His	Lys	Ala	Asn	Thr
1				5					10					15

<210> 2

<211> 16

<212> PRT

<213> Artificial

<220>

<223> P31 16 mer fragment- D form retroinversion

<400> 2

Gly	Pro	His	Arg	Arg	Gly	Arg	Pro	Asn	Ser	Arg	Ser	Ser	Lys	Arg	Thr
1				5					10					15	

<210> 3

<211> 14

<212> PRT

<213> Artificial

<220>

<223> HAX42 14 mer fragment-D form retroinversion

<400> 3

Gly Thr Ser Asn Gly Asn Gly Cys Cys Asn Tyr Asp Gly Pro
1 5 10

<210> 4

<211> 15

<212> PRT

<213> Artificial

<220>

<223> PAX2 15 mer fragment

<400> 4

Thr Asn Ala Lys His Ser Ser His Asn Arg Arg Leu Arg Thr Arg
1 5 10 15

<210> 5

<211> 16

<212> PRT

<213> Artificial

<220>

<223> P31 16 mer fragment

<400> 5

Thr Arg Lys Ser Ser Arg Ser Asn Pro Arg Gly Arg Arg His Pro Gly
1 5 10 15

<210> 6

<211> 14

<212> PRT

<213> Artificial

<220>

<223> HAX42 14 mer fragment

<400> 6

Pro Gly Asp Tyr Asn Cys Cys Gly Asn Gly Asn Ser Thr Gly
1 5 10

<210> 7
<211> 40
<212> PRT
<213> Artificial

<220>
<223> PAX2 full length

<400> 7

Ser Thr Pro Pro Ser Arg Glu Ala Tyr Ser Arg Pro Tyr Ser Val Asp
1 5 10 15

Ser Asp Ser Asp Thr Asn Ala Lys His Ser Ser His Asn Arg Arg Leu
20 25 30

Arg Thr Arg Ser Arg Pro Asn Gly
35 40

<210> 8
<211> 44
<212> PRT
<213> Artificial

<220>
<223> HAX42 full length with additional L-Lysine

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Dansylated L-Lysine

<400> 8

Ser Asp His Ala Leu Gly Thr Asn Leu Arg Ser Asp Asn Ala Lys Glu
1 5 10 15

Pro Gly Asp Tyr Asn Cys Cys Gly Asn Gly Asn Ser Thr Gly Arg Lys
20 25 30

Val Phe Asn Arg Arg Arg Pro Ser Ala Ile Pro Thr
35 40

<210> 9
<211> 16
<212> PRT
<213> Artificial

<220>
<223> ZElan 144; PAX2 15 mer fragment-D form retroinversion with
addi
tional L-lysine in position 1

<220>
<221> MOD_RES
<222> (1)..(1)
<223> Dansylated L-lysine

<400> 9

Lys Arg Thr Arg Leu Arg Arg Asn His Ser Ser His Lys Ala Asn Thr
1 5 10 15

<210> 10
<211> 17
<212> PRT
<213> Artificial

<220>
<223> ZElan 145; P31 16 mer fragment- D form retroinversion with
additi
onal L-lysine in position 1

<220>
<221> MOD_RES
<222> (1)..(1)
<223> dansylated L-lysine

<400> 10

Lys Gly Pro His Arg Arg Gly Arg Pro Asn Ser Arg Ser Ser Lys Arg
1 5 10 15

Thr

<210> 11
<211> 15
<212> PRT
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<220>
<223> ZElan 146; HAX42 14 mer fragment-D form retroinversion with
addit
ional L-Lysine in position 1

<220>
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<222> (1)..(1)
<223> dansylated L-Lysine

<400> 11

Lys	Gly	Thr	Ser	Asn	Gly	Asn	Gly	Cys	Cys	Asn	Tyr	Asp	Gly	Pro
1				5					10					15

<210> 12
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<213> Artificial

<220>
<223> ZElan 129; PAX2 15 mer fragment with additional L-Lysine in
posi
tion 1

<220>
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<222> (1)..(1)
<223> dansylated L-Lysine

<400> 12

Lys	Thr	Asn	Ala	Lys	His	Ser	Ser	His	Asn	Arg	Arg	Leu	Arg	Thr	Arg
1				5					10					15	

<210> 13

<211> 17
<212> PRT
<213> Artificial

<220>
<223> ZElan 031; P31 16 mer fragment with additional L-Lysine in
positi
on 1

<220>
<221> MOD_RES
<222> (1)..(1)
<223> dansylated L-Lysine

<400> 13

Lys Thr Arg Lys Ser Ser Arg Ser Asn Pro Arg Gly Arg Arg His Pro
1 5 10 15

Gly

<210> 14
<211> 15
<212> PRT
<213> Artificial

<220>
<223> ZElan 091; HAX42 14 mer fragment with additional L-lysine in
posi
tion 1

<220>
<221> MOD_RES
<222> (1)..(1)
<223> dansylated L-lysine

<400> 14

Lys Pro Gly Asp Tyr Asn Cys Cys Gly Asn Gly Asn Ser Thr Gly
1 5 10 15

<210> 15
<211> 40

<212> PRT
<213> Artificial

<220>
<223> PAX2 full length with additional L-lysine in position 1

<220>
<221> MOD_RES
<222> (1)..(1)
<223> dansylated L-Lysine

<400> 15

Ser Thr Pro Pro Ser Arg Glu Ala Tyr Ser Arg Pro Tyr Ser Val Asp
1 5 10 15

Ser Asp Ser Asp Thr Asn Ala Lys His Ser Ser His Asn Arg Arg Leu
20 25 30

Arg Thr Arg Ser Arg Pro Asn Gly
35 40

<210> 16
<211> 44
<212> PRT
<213> Artificial

<220>
<223> S15 44 mer fragment L-form

<400> 16

Arg Ser Gly Ala Tyr Glu Ser Pro Asp Gly Arg Gly Gly Arg Ser Tyr
1 5 10 15

Val Gly Gly Gly Gly Gly Cys Gly Asn Ile Gly Arg Lys His Asn Leu
20 25 30

Trp Gly Leu Arg Thr Ala Ser Pro Ala Cys Trp Asp
35 40

<210> 17

<211> 44
<212> PRT
<213> Artificial

<220>
<223> S21 44 mer fragment L-form

<400> 17

Ser Pro Arg Ser Phe Trp Pro Val Val Ser Arg His Glu Ser Phe Gly
1 5 10 15

Ile Ser Asn Tyr Leu Gly Cys Gly Tyr Arg Thr Cys Ile Ser Gly Thr
20 25 30

Met Thr Lys Ser Ser Pro Ile Tyr Pro Arg His Ser
35 40

<210> 18
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<212> PRT
<213> Artificial

<220>
<223> S22 44 mer fragment L-form

<400> 18

Ser Ser Ser Ser Asp Trp Gly Gly Val Pro Gly Lys Val Val Arg Glu
1 5 10 15

Arg Phe Lys Gly Arg Gly Cys Gly Ile Ser Ile Thr Ser Val Leu Thr
20 25 30

Gly Lys Pro Asn Pro Cys Pro Glu Pro Lys Ala Ala
35 40

<210> 19
<211> 44
<212> PRT
<213> Artificial

<220>

<223> Sni10 44 mer fragment L-form

<400> 19

Arg Val Gly Gln Cys Thr Asp Ser Asp Val Arg Arg Pro Trp Ala Arg
1 5 10 15

Ser Cys Ala His Gln Gly Cys Gly Ala Gly Thr Arg Asn Ser His Gly
20 25 30

Cys Ile Thr Arg Pro Leu Arg Gln Ala Ser Ala His
35 40

<210> 20

<211> 39

<212> PRT

<213> Artificial

<220>

<223> Sni28 39 mer fragment L-form

<400> 20

Ser His Ser Gly Gly Met Asn Arg Ala Tyr Gly Asp Val Phe Arg Glu
1 5 10 15

Leu Arg Asp Arg Trp Asn Ala Thr Ser His His Thr Arg Pro Thr Pro
20 25 30

Gln Leu Pro Arg Gly Pro Asn
35

<210> 21

<211> 41

<212> PRT

<213> Artificial

<220>

<223> Sni34 41 mer fragment L-form

<400> 21

Ser Pro Cys Gly Gly Ser Trp Gly Arg Phe Met Gln Gly Gly Leu Phe

[illegible]

Ser Leu Glu Pro Pro Ser Ser Asp Tyr
35 40

<210>	22
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<212>	PRT
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<220>
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<400> 22

Arg Gly Ala Ala Asp Gln Arg Arg Gly Trp Ser Glu Asn Leu Gly Leu
1 5 10 15

Pro Arg Val Gly Trp Asp Ala / Ile Ala His Asn Ser Tyr Thr Phe Thr
20 25 30

Ser Arg Arg Pro Arg Pro Pro
35

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<210> 23
<211> 44
<212> PRT
<213> Artificial
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<220>
<223> Sni45 44 mer/fragment L-form

<400> 23

Ser Gly Gly Glu Val Ser Ser Trp Gly Arg Val Asn Asp Leu Cys Ala
1 5 10 15

Arg Val Ser Trp / Thr Gly Cys Gly Thr Ala Arg Ser Ala Arg Thr Asp
20 25 30

Asn Lys Gly Phe Leu Pro Lys His Ser Ser Leu Arg
35 40

<210> 24
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<212> PRT
<213> Artificial

<220>
<223> SniAX2 44 mer fragment L-form

<400> 24

Ser Asp Ser Asp Gly Asp His Tyr Gly Leu Arg Gly Gly Val Arg Cys
1 5 10 15

Ser Leu Arg Asp Arg Gly Cys Gly Leu Ala Leu Ser Thr Val His Ala
20 25 30

Gly Pro Pro Ser Phe Tyr Pro Lys Leu Ser Ser Pro
35 40

<210> 25
<211> 39
<212> PRT
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<220>
<223> SniAX4 39 mer fragment L-form

<400> 25

Arg Ser Leu Gly Asn Tyr Gly Val Thr Gly Thr Val Asp Val Thr Val
1 5 10 15

Leu Pro Met Pro Gly His Ala Asn His Leu Gly Val Ser Ser Ala Ser
20 25 30

Ser Ser Asp Pro Pro Arg Arg
35

<210> 26
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<212> PRT
<213> Artificial

<220>
<223> SniAX6 38 mer fragment L-form

<400> 26

Arg Thr Thr Thr Ala Lys Gly Cys Leu Leu Gly Ser Phe Gly Val Leu
1 5 10 15

Ser Gly Cys Ser Phe Thr Pro Thr Ser Pro Pro Pro His Leu Gly Tyr
20 25 30

Pro Pro His Ser Val Asn
35

<210> 27
<211> 39
<212> PRT
<213> Artificial

<220>
<223> SniAX8 39 mer fragment L-form

<400> 27

Ser Pro Lys Leu Ser Ser Val Gly Val Met Thr Lys Val Thr Glu Leu
1 5 10 15

Pro Thr Glu Gly Pro Asn Ala Ile Ser Ile Pro Ile Ser Ala Thr Leu
20 25 30

Gly Pro Arg Asn Pro Leu Arg
35

<210> 28
<211> 39
<212> PRT
<213> Artificial

<220>

<223> DAB3 39 mer fragment L-form

<400> 28

Arg Trp Cys Gly Ala Glu Leu Cys Asn Ser Val Thr Lys Lys Phe Arg
1 5 10 15

Pro Gly Trp Arg Asp His Ala Asn Pro Ser Thr His His Arg Thr Pro
20 25 30

Pro Pro Ser Gln Ser Ser Pro
35

<210> 29

<211> 44

<212> PRT

<213> Artificial

<220>

<223> DAB7 44 mer fragment L-form

<400> 29

Arg Trp Cys Gly Ala Asp Asp Pro Cys Gly Ala Ser Arg Trp Arg Gly
1 5 10 15

Gly Asn Ser Leu Phe Gly Cys Gly Leu Arg Cys Ser Ala Ala Gln Ser
20 25 30

Thr Pro Ser Gly Arg Ile His Ser Thr Ser Thr Ser
35 40

<210> 30

<211> 39

<212> PRT

<213> Artificial

<220>

<223> DAB10 39 mer fragment L-form

<400> 30

Ser Lys Ser Gly Glu Gly Gly Asp Ser Ser Arg Gly Glu Thr Gly Trp
1 5 10 15

Ala Arg Val Arg Ser His Ala Met Thr Ala Gly Arg Phe Arg Trp Tyr
20 25 30

Asn Gln Leu Pro Ser Asp Arg
35

<210> 31
<211> 38
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<220>
<223> DAB18 38 mer fragment L-form

<400> 31

Arg Ser Ser Ala Asn Asn Cys Glu Trp Lys Ser Asp Trp Met Arg Arg
1 5 10 15

Ala Cys Ile Ala Arg Tyr Ala Asn Ser Ser Gly Pro Ala Arg Ala Val
20 25 30

Asp Thr Lys Ala Ala Pro
35

<210> 32
<211> 44
<212> PRT
<213> Artificial

<220>
<223> DAB24 44 mer fragment L-form

<400> 32

Ser Lys Trp Ser Trp Ser Ser Arg Trp Gly Ser Pro Gln Asp Lys Val
1 5 10 15

Glu Lys Thr Arg Ala Gly Cys Gly Gly Ser Pro Ser Ser Thr Asn Cys
20 25 30

His Pro Tyr Thr Phe Ala Pro Pro Pro Gln Ala Gly
35 40

<210> 33
<211> 44
<212> PRT
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<220>
<223> DAB30 44 mer fragment L-form

<400> 33

Ser Gly Phe Trp Glu Phe Ser Arg Gly Leu Trp Asp Gly Glu Asn Arg
1 5 10 15

Lys Ser Val Arg Ser Gly Cys Gly Phe Arg Gly Ser Ser Ala Gln Gly
20 25 30

Pro Cys Pro Val Thr Pro Ala Thr Ile Asp Lys His
35 40

<210> 34
<211> 44
<212> PRT
<213> Artificial

<220>
<223> DAX15 44 mer fragment L-form

<400> 34

Ser Glu Ser Gly Arg Cys Arg Ser Val Ser Arg Trp Met Thr Thr Trp
1 5 10 15

Gln Thr Gln Lys Gly Gly Cys Gly Ser Asn Val Ser Arg Gly Ser Pro
20 25 30

Leu Asp Pro Ser His Gln Thr Gly His Ala Thr Thr

35

40

<210> 35
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<212> PRT
<213> Artificial

<220>
<223> DAX23 39 mer fragment L-form

<400> 35

Arg Glu Trp Arg Phe Ala Gly Pro Pro Leu Asp Leu Trp Ala Gly Pro
1 5 10 15

Ser Leu Pro Ser Phe Asn Ala Ser Ser His Pro Arg Ala Leu Arg Thr
20 25 30

Tyr Trp Ser Gln Arg Pro Arg
35

<210> 36
<211> 44
<212> PRT
<213> Artificial

<220>
<223> DAX24 44 mer fragment L-form

<400> 36

Arg Met Glu Asp Ile Lys Asn Ser Gly Trp Arg Asp Ser Cys Arg Trp
1 5 10 15

Gly Asp Leu Arg Pro Gly Cys Gly Ser Arg Gln Trp Tyr Pro Ser Asn
20 25 30

Met Arg Ser Ser Arg Asp Tyr Pro Ala Gly Gly His
35 40

<210> 37
<211> 36

<212> PRT
<213> Artificial

<220>
<223> DAX27 36 mer fragment L-form

<400> 37

Ser His Pro Trp Tyr Arg His Trp Asn His Gly Asp Phe Ser Gly Ser
1 5 10 15

Gly Gln Ser Arg His Thr Pro Pro Glu Ser Pro His Pro Gly Arg Pro
20 25 30

Asn Ala Thr Ile
35

<210> 38
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<212> PRT
<213> Artificial

<220>
<223> DCX8 44 mer fragment L-form

<400> 38

Arg Tyr Lys His Asp Ile Gly Cys Asp Ala Gly Val Asp Lys Lys Ser
1 5 10 15

Ser Ser Val Arg Gly Gly Cys Gly Ala His Ser Ser Pro Pro Arg Ala
20 25 30

Gly Arg Gly Pro Arg Gly Thr Met Val Ser Arg Leu
35 40

<210> 39
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<212> PRT
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<220>
<223> DCX11 44 mer fragment L-form

<400> 39

Ser Gln Gly Ser Lys Gln Cys Met Gln Tyr Arg Thr Gly Arg Leu Thr
1 5 10 15

Val Gly Ser Glu Tyr Gly Cys Gly Met Asn Pro Ala Arg His Ala Thr
20 25 30

Pro Ala Tyr Pro Ala Arg Leu Leu Pro Arg Tyr Arg
35 40

<210> 40

<211> 44

<212> PRT

<213> Artificial

<220>

<223> DCX26 44 mer fragment L-form

<400> 40

Ser Gly Arg Thr Thr Ser Glu Ile Ser Gly Leu Trp Gly Trp Gly Asp
1 5 10 15

Asp Arg Ser Gly Tyr Gly Trp Gly Asn Thr Leu Arg Pro Asn Tyr Ile
20 25 30

Pro Tyr Arg Gln Ala Thr Asn Arg His Arg Tyr Thr
35 40

<210> 41

<211> 39

<212> PRT

<213> Artificial

<220>

<223> DCX33 39 mer fragment L-form

<400> 41

Arg Trp Asn Trp Thr Val Leu Pro Ala Thr Gly Gly His Tyr Trp Thr
1 5 10 15

Arg Ser Thr Asp Tyr His Ala Ile Asn Asn His Arg Pro Ser Ile Pro
20 25 30

His Gln His Pro Thr Pro Ile
35

<210> 42
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<220>
<223> DCX36 44 mer fragment L-form

<400> 42

Ser Trp Ser Ser Trp Asn Trp Ser Ser Lys Thr Thr Arg Leu Gly Asp
1 5 10 15

Arg Ala Thr Arg Glu Gly Cys Gly Pro Ser Gln Ser Asp Gly Cys Pro
20 25 30

Tyr Asn Gly Arg Leu Thr Thr Val Lys Pro Arg Thr
35 40

<210> 43
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<212> PRT
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<220>
<223> DCX39 37 mer fragment L-form

<400> 43

Ser Gly Ser Leu Asn Ala Trp Gln Pro Arg Ser Trp Val Gly Gly Ala
1 5 10 15

Phe Arg Ser His Ala Asn Asn Asn Leu Asn Pro Lys Pro Thr Met Val
20 25 30

Thr Arg His Pro Thr
35

<210> 44
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<220>
<223> DCX42 44 mer fragment L-form

<400> 44

Arg Tyr Ser Gly Leu Ser Pro Arg Asp Asn Gly Pro Ala Cys Ser Gln
1 5 10 15

Glu Ala Thr Leu Glu Gly Cys Gly Ala Gln Arg Leu Met Ser Thr Arg
20 25 30

Arg Lys Gly Arg Asn Ser Arg Pro Gly Trp Thr Leu
35 40

<210> 45
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<220>
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<400> 45

Ser Val Gly Asn Asp Lys Thr Ser Arg Pro Val Ser Phe Tyr Gly Arg
1 5 10 15

Val Ser Asp Leu Trp Asn Ala Ser Leu Met Pro Lys Arg Thr Pro Ser
20 25 30

Ser Lys Arg His Asp Asp Gly
35

<210> 46
<211> 38
<212> PRT
<213> Artificial

<220>
<223> PAX9 38 mer fragment L-form

<400> 46

Arg Trp Pro Ser Val Gly Tyr Lys Gly Asn Gly Ser Asp Thr Ile Asp
1 5 10 15

Val His Ser Asn Asp Ala Ser Thr Lys Arg Ser Leu Ile Tyr Asn His
20 25 30

Arg Arg Pro Leu Phe Pro
35

<210> 47
<211> 39
<212> PRT
<213> Artificial

<220>
<223> PAX14 39 mer fragment L-form

<400> 47

Arg Thr Phe Glu Asn Asp Gly Leu Gly Val Gly Arg Ser Ile Gln Lys
1 5 10 15

Lys Ser Asp Arg Trp Tyr Ala Ser His Asn Ile Arg Ser His Phe Ala
20 25 30

Ser Met Ser Pro Ala Gly Lys
35

<210> 48
<211> 44
<212> PRT
<213> Artificial

<220>

<223> PAX15 44 mer fragment L-form

<400> 48

Ser Tyr Cys Arg Val Lys Gly Gly Gly Glu Gly Gly His Thr Asp Ser
1 5 10 15

Asn Leu Ala Arg Ser Gly Cys Gly Lys Val Ala Arg Thr Ser Arg Leu
20 25 30

Gln His Ile Asn Pro Arg Ala Thr Pro Pro Ser Arg
35 40

<210> 49

<211> 39

<212> PRT

<213> Artificial

<220>

<223> PAX16 39 mer fragment L-form

<400> 49

Ser Trp Thr Arg Trp Gly Lys His Thr His Gly Gly Phe Val Asn Lys
1 5 10 15

Ser Pro Pro Gly Lys Asn Ala Thr Ser Pro Tyr Thr Asp Ala Gln Leu
20 25 30

Pro Ser Asp Gln Gly Pro Pro
35

<210> 50

<211> 44

<212> PRT

<213> Artificial

<220>

<223> PAX17 44 mer fragment L-form

<400> 50

Ser Gln Val Asp Ser Phe Arg Asn Ser Phe Arg Trp Tyr Glu Pro Ser
1 5 10 15

Arg Ala Leu Cys His Gly Cys Gly Lys Arg Asp Thr Ser Thr Thr Arg
20 25 30

Ile His Asn Ser Pro Ser Asp Ser Tyr Pro Thr Arg
35 40

<210> 51
<211> 39
<212> PRT
<213> Artificial

<220>
<223> PAX18 39 mer fragment L-form

<400> 51

Ser Phe Leu Arg Phe Gln Ser Pro Arg Phe Glu Asp Tyr Ser Arg Thr
1 5 10 15

Ile Ser Arg Leu Arg Asn Ala Thr Asn Pro Ser Asn Val Ser Asp Ala
20 25 30

His Asn Asn Arg Ala Leu Ala
35

<210> 52
<211> 39
<212> PRT
<213> Artificial

<220>
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<400> 52

Arg Ser Ile Thr Asp Gly Gly Leu Asn Glu Val Asp Leu Ser Ser Val
1 5 10 15

Ser Asn Val Leu Glu Asn Ala Asn Ser His Arg Ala Tyr Arg Lys His

20

25

30

Arg Pro Thr Leu Lys Arg Pro
35

<210> 53
<211> 44
<212> PRT
<213> Artificial

<220>
<223> PAX38 44 mer fragment L-form

<400> 53

Ser Ser Lys Val Ser Ser Pro Arg Asp Pro Thr Val Pro Arg Lys Gly
1 5 10 15

Gly Asn Val Asp Tyr Gly Cys Gly His Arg Ser Ser Ala Arg Met Pro
20 25 30

Thr Ser Ala Leu Ser Ser Ile Thr Lys Cys Tyr Thr
35 40

<210> 54
<211> 44
<212> PRT
<213> Artificial

<220>
<223> PAX40 44 mer fragment L-form

<400> 54

Arg Ala Ser Thr Gln Gly Gly Arg Gly Val Ala Pro Glu Phe Gly Ala
1 5 10 15

Ser Val Leu Gly Arg Gly Cys Gly Ser Ala Thr Tyr Tyr Thr Asn Ser
20 25 30

Thr Ser Cys Lys Asp Ala Met Gly His Asn Tyr Ser
35 40

<210> 55
<211> 39
<212> PRT
<213> Artificial

<220>
<223> PAX43 39 mer fragment L-form

<400> 55

Arg Trp Cys Glu Lys His Lys Phe Thr Ala Ala Arg Cys Ser Ala Gly
1 5 10 15

Ala Gly Phe Glu Arg Asp Ala Ser Arg Pro Pro Gln Pro Ala His Arg
20 25 30

Asp Asn Thr Asn Arg Asn Ala
35

<210> 56
<211> 39
<212> PRT
<213> Artificial

<220>
<223> PAX45 39 mer fragment L-form

<400> 56

Ser Phe Gln Val Tyr Pro Asp His Gly Leu Glu Arg His Ala Leu Asp
1 5 10 15

Gly Thr Gly Pro Leu Tyr Ala Met Pro Gly Arg Trp Leu Arg Ala Arg
20 25 30

Pro Gln Asn Arg Asp Arg Gln
35

<210> 57
<211> 38
<212> PRT

<213> Artificial

<220>

<223> PAX46 38 mer fragment L-form

<400> 57

Ser Arg Cys Thr Asp Asn Glu Gln Cys Pro Asp Thr Gly Thr Arg Ser
1 5 10 15

Arg Ser Val Ser Asn Ala Arg Tyr Phe Ser Ser Arg Leu Leu Lys Thr
20 25 30

His Ala Pro His Arg Pro
35

<210> 58

<211> 39

<212> PRT

<213> Artificial

<220>

<223> P31 39 mer fragment L-form

<400> 58

Ser Ala Arg Asp Ser Gly Pro Ala Glu Asp Gly Ser Arg Ala Val Arg
1 5 10 15

Leu Asn Gly Val Glu Asn Ala Asn Thr Arg Lys Ser Ser Arg Ser Asn
20 25 30

Pro Arg Gly Arg Arg His Pro
35

<210> 59

<211> 44

<212> PRT

<213> Artificial

<220>

<223> P90 44 mer fragment L-form

<400> 59

Ser Ser Ala Asp Ala Glu Lys Cys Ala Gly Ser Leu Leu Trp Trp Gly
1 5 10 15

Arg Gln Asn Asn Ser Gly Cys Gly Ser Pro Thr Lys Lys His Leu Lys
20 25 30

His Arg Asn Arg Ser Gln Thr Ser Ser Ser Ser His
35 40

<210> 60

<211> 39

<212> PRT

<213> Artificial

<220>

<223> 5PAX3 39 mer fragment L-form

<400> 60

Arg Pro Lys Asn Val Ala Asp Ala Tyr Ser Ser Gln Asp Gly Ala Ala
1 5 10 15

Ala Glu Glu Thr Ser His Ala Ser Asn Ala Ala Arg Lys Ser Pro Lys
20 25 30

His Lys Pro Leu Arg Arg Pro
35

<210> 61

<211> 39

<212> PRT

<213> Artificial

<220>

<223> 5PAX5 39 mer fragment L-form

<400> 61

Arg Gly Ser Thr Gly Thr Ala Gly Gly Glu Arg Ser Gly Val Leu Asn
1 5 10 15

Leu His Thr Arg Asp Asn Ala Ser Gly Ser Gly Phe Lys Pro Trp Tyr
20 25 30

Pro Ser Asn Arg Gly His Lys
35

<210> 62
<211> 39
<212> PRT
<213> Artificial

<220>
<223> 5PAX7 39 mer fragment L-form

<400> 62

Arg Trp Gly Trp Glu Arg Ser Pro Ser Asp Tyr Asp Ser Asp Met Asp
1 5 10 15

Leu Gly Ala Arg Arg Tyr Ala Thr Arg Thr His Arg Ala Pro Pro Arg
20 25 30

Val Leu Lys Ala Pro Leu Pro
35

<210> 63
<211> 44
<212> PRT
<213> Artificial

<220>
<223> 5PAX12 44 mer fragment L-form

<400> 63

Arg Gly Trp Lys Cys Glu Gly Ser Gln Ala Ala Tyr Gly Asp Lys Asp
1 5 10 15

Ile Gly Arg Ser Arg Gly Cys Gly Ser Ile Thr Lys Asn Asn Thr Asn
20 25 30

His Ala His Pro Ser His Gly Ala Val Ala Lys Ile
35 40

<210> 64
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<212> PRT
<213> Artificial

<220>
<223> HAX9 39 mer fragment L-form

<400> 64

Ser Arg Glu Glu Ala Asn Trp Asp Gly Tyr Lys Arg Glu Met Ser His
1 5 10 15

Arg Ser Arg Phe Trp Asp Ala Thr His Leu Ser Arg Pro Arg Arg Pro
20 25 30

Ala Asn Ser Gly Asp Pro Asn
35

<210> 65
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<212> PRT
<213> Artificial

<220>
<223> HAX35 44 mer fragment L-form

<400> 65

Glu Trp Tyr Ser Trp Lys Arg Ser Ser Lys Ser Thr Gly Leu Gly Asp
1 5 10 15

Thr Ala Thr Arg Glu Gly Cys Gly Pro Ser Gln Ser Asp Gly Cys Pro
20 25 30

Tyr Asn Gly Arg Leu Thr Thr Val Lys Pro Arg Lys
35 40

<210> 66

<211> 44
<212> PRT
<213> Artificial

<220>
<223> HAX40 44 mer fragment L-form

<400> 66

Arg Glu Phe Ala Glu Arg Arg Leu Trp Gly Cys Asp Asp Leu Ser Trp
1 5 10 15

Arg Leu Asp Ala Glu Gly Cys Gly Pro Thr Pro Ser Asn Arg Ala Val
20 25 30

Lys His Arg Lys Pro Arg Pro Arg Ser Pro Ala Leu
35 40

<210> 67
<211> 44
<212> PRT
<213> Artificial

<220>
<223> HAX42 44 mer fragment L-form

<400> 67

Ser Asp His Ala Leu Gly Thr Asn Leu Arg Ser Asp Asn Ala Lys Glu
1 5 10 15

Pro Gly Asp Tyr Asn Cys Cys Gly Asn Gly Asn Ser Thr Gly Arg Lys
20 25 30

Val Phe Asn Arg Arg Arg Pro Ser Ala Ile Pro Thr
35 40

<210> 68
<211> 44
<212> PRT
<213> Artificial

<220>

<223> HCA3 44 mer fragment L-form

<400> 68

Arg His Ile Ser Glu Tyr Ser Phe Ala Asn Ser His Leu Met Gly Gly
1 5 10 15

Glu Ser Lys Arg Lys Gly Cys Gly Ile Asn Gly Ser Phe Ser Pro Thr
20 25 30

Cys Pro Arg Ser Pro Thr Pro Ala Phe Arg Arg Thr
35 40

<210> 69

<211> 38

<212> PRT

<213> Artificial

<220>

<223> H40 38 mer fragment L-form

<400> 69

Ser Arg Glu Ser Gly Met Trp Gly Ser Trp Trp Arg Gly His Arg Leu
1 5 10 15

Asn Ser Thr Gly Gly Asn Ala Asn Met Asn Ala Ser Leu Pro Pro Asp
20 25 30

Pro Pro Val Ser Thr Pro
35

<210> 70

<211> 39

<212> PRT

<213> Artificial

<220>

<223> PAX2 39 mer fragment L-form

<400> 70

Ser Thr Pro Pro Ser Arg Glu Ala Tyr Ser Arg Pro Tyr Ser Val Asp

1 5 10 15

Ser Asp Ser Asp Thr Asn Ala Lys His Ser Ser His Asn Arg Arg Leu
 20 25 30

Arg Thr Arg Ser Arg Pro Asn
 35

<210> 71
 <211> 1827
 <212> PRT
 <213> Artificial

<220>
 <223> hSI receptor

<400> 71

Met Ala Arg Lys Lys Phe Ser Gly Leu Glu Ile Ser Leu Ile Val Leu
 1 5 10 15

Phe Val Ile Val Thr Ile Ile Ala Ile Ala Leu Ile Val Val Leu Ala
 20 25 30

Thr Lys Thr Pro Ala Val Asp Glu Ile Ser Asp Ser Thr Ser Thr Pro
 35 40 45

Ala Thr Thr Arg Val Thr Thr Asn Pro Ser Asp Ser Gly Lys Cys Pro
 50 55 60

Asn Val Leu Asn Asp Pro Val Asn Val Arg Ile Asn Cys Ile Pro Glu
 65 70 75 80

Gln Phe Pro Thr Glu Gly Ile Cys Ala Gln Arg Gly Cys Cys Trp Arg
 85 90 95

Pro Trp Asn Asp Ser Leu Ile Pro Trp Cys Phe Phe Val Asp Asn His
 100 105 110

Gly Tyr Asn Val Gln Asp Met Thr Thr Thr Ser Ile Gly Val Glu Ala
115 120 125

Lys Leu Asn Arg Ile Pro Ser Pro Thr Leu Phe Gly Asn Asp Ile Asn
130 135 140

Ser Val Leu Phe Thr Thr Gln Asn Gln Thr Pro Asn Arg Phe Arg Phe
145 150 155 160

Lys Ile Thr Asp Pro Asn Asn Arg Arg Tyr Glu Val Pro His Gln Tyr
165 170 175

Val Lys Glu Phe Thr Gly Pro Thr Val Ser Asp Thr Leu Tyr Asp Val
180 185 190

Lys Val Ala Gln Asn Pro Phe Ser Ile Gln Val Ile Arg Lys Ser Asn
195 200 205

Gly Lys Thr Leu Phe Asp Thr Ser Ile Gly Pro Leu Val Tyr Ser Asp
210 215 220

Gln Tyr Leu Gln Ile Ser Ala Arg Leu Pro Ser Asp Tyr Ile Tyr Gly
225 230 235 240

Ile Gly Glu Gln Val His Lys Arg Phe Arg His Asp Leu Ser Trp Lys
245 250 255

Thr Trp Pro Ile Phe Thr Arg Asp Gln Leu Pro Gly Asp Asn Asn Asn
260 265 270

Asn Leu Tyr Gly His Gln Thr Phe Phe Met Cys Ile Glu Asp Thr Ser
275 280 285

Gly Lys Ser Phe Gly Val Phe Leu Met Asn Ser Asn Ala Met Glu Ile
290 295 300

Phe Ile Gln Pro Thr Pro Ile Val Thr Tyr Arg Val Thr Gly Gly Ile

305		310		315		320
Leu Asp Phe Tyr	Ile 325	Leu Leu Gly	Asp 330	Thr Pro Glu	Gln Val Val	Gln 335
Gln Tyr Gln	Gln 340	Leu Val Gly	Leu Pro 345	Ala Met Pro	Ala Tyr Trp	Asn 350
Leu Gly Phe	Gln 355	Leu Ser Arg	Trp Asn 360	Tyr Lys Ser	Leu Asp Val	Val 365
Lys Glu Val	Val Arg Arg	Asn Arg 375	Glu Ala Gly	Ile Pro Phe	Asp Thr	
Gln Val Thr	Asp Ile 390	Asp Tyr Met	Glu Asp 395	Lys Lys Asp	Phe Thr Tyr	400
Asp Gln Val	Ala Phe 405	Asn Gly Leu	Pro Gln 410	Phe Val Gln	Asp Leu His	415
Asp His Gly	Gln Lys Tyr 420	Val Ile Ile	Leu Asp 425	Pro Ala Ile	Ser Ile	430
Gly Arg Arg	Ala Asn Gly 435	Thr Thr Tyr	Ala Thr Tyr	Glu Arg Gly	Asn	445
Thr Gln His	Val Trp Ile 450	Asn Glu Ser	Asp Gly 455	Ser Thr Pro	Ile Ile	460
Gly Glu Val	Trp Pro Gly 470	Leu Thr Val	Tyr Pro 475	Asp Phe Thr	Asn Pro	480
Asn Cys Ile	Asp Trp Trp 485	Ala Asn Glu	Cys Ser 490	Ile Phe His	Gln Glu	495
Val Gln Tyr	Asp Gly Leu Trp 500	Ile Asp Met	Asn Glu Val	Ser Ser Phe		510

Ile Gln Gly Ser Thr Lys Gly Cys Asn Val Asn Lys Leu Asn Tyr Pro
 515 520 525
 Pro Phe Thr Pro Asp Ile Leu Asp Lys Leu Met Tyr Ser Lys Thr Ile
 530 535 540
 Cys Met Asp Ala Val Gln Asn Trp Gly Lys Gln Tyr Asp Val His Ser
 545 550 555 560
 Leu Tyr Gly Tyr Ser Met Ala Ile Ala Thr Glu Gln Ala Val Gln Lys
 565 570 575
 Val Phe Pro Asn Lys Arg Ser Phe Ile Leu Thr Arg Ser Thr Phe Ala
 580 585 590
 Gly Ser Gly Arg His Ala Ala His Trp Leu Gly Asp Asn Thr Ala Ser
 595 600 605
 Trp Glu Gln Met Glu Trp Ser Ile Thr Gly Met Leu Glu Phe Ser Leu
 610 615 620
 Phe Gly Ile Pro Leu Val Gly Ala Asp Ile Cys Gly Phe Val Ala Glu
 625 630 635 640
 Thr Thr Glu Glu Leu Cys Arg Arg Trp Met Gln Leu Gly Ala Phe Tyr
 645 650 655
 Pro Phe Ser Arg Asn His Asn Ser Asp Gly Tyr Glu His Gln Asp Pro
 660 665 670
 Ala Phe Phe Gly Gln Asn Ser Leu Leu Val Lys Ser Ser Arg Gln Tyr
 675 680 685
 Leu Thr Ile Arg Tyr Thr Leu Leu Pro Phe Leu Tyr Thr Leu Phe Tyr
 690 695 700

Lys Ala His Val Phe Gly Glu Thr Val Ala Arg Pro Val Leu His Glu
705 710 715 720

Phe Tyr Glu Asp Thr Asn Ser Trp Ile Glu Asp Thr Glu Phe Leu Trp
725 730 735

Gly Pro Ala Leu Leu Ile Thr Pro Val Leu Lys Gln Gly Ala Asp Thr
740 745 750

Val Ser Ala Tyr Ile Pro Asp Ala Ile Trp Tyr Asp Tyr Glu Ser Gly
755 760 765

Ala Lys Arg Pro Trp Arg Lys Gln Arg Val Asp Met Tyr Leu Pro Ala
770 775 780

Asp Lys Ile Gly Leu His Leu Arg Gly Gly Tyr Ile Ile Pro Ile Gln
785 790 795 800

Glu Pro Asp Val Thr Thr Thr Ala Ser Arg Lys Asn Pro Leu Gly Leu
805 810 815

Ile Val Ala Leu Gly Glu Asn Asn Thr Ala Lys Gly Asp Phe Phe Trp
820 825 830

Asp Asp Gly Glu Thr Lys Asp Thr Ile Gln Asn Gly Asn Tyr Ile Leu
835 840 845

Tyr Thr Phe Ser Val Ser Asn Asn Thr Leu Asp Ile Val Cys Thr His
850 855 860

Ser Ser Tyr Gln Glu Gly Thr Thr Leu Ala Phe Gln Thr Val Lys Ile
865 870 875 880

Leu Gly Leu Thr Asp Ser Val Thr Glu Val Arg Val Ala Glu Asn Asn
885 890 895

Gln Pro Met Asn Ala His Ser Asn Phe Thr Tyr Asp Ala Ser Asn Gln
 900 905 910
 Val Leu Leu Ile Ala Asp Leu Lys Leu Asn Leu Gly Arg Asn Phe Ser
 915 920 925
 Val Gln Trp Asn Gln Ile Phe Ser Glu Asn Glu Arg Phe Asn Cys Tyr
 930 935 940
 Pro Asp Ala Asp Leu Ala Thr Glu Gln Lys Cys Thr Gln Arg Gly Cys
 945 950 955 960
 Val Trp Arg Thr Gly Ser Ser Leu Ser Lys Ala Pro Glu Cys Tyr Phe
 965 970 975
 Pro Arg Gln Asp Asn Ser Tyr Ser Val Asn Ser Ala Arg Tyr Ser Ser
 980 985 990
 Met Gly Ile Thr Ala Asp Leu Gln Leu Asn Thr Ala Asn Ala Arg Ile
 995 1000 1005
 Lys Leu Pro Ser Asp Pro Ile Ser Thr Leu Arg Val Glu Val Lys
 1010 1015 1020
 Tyr His Lys Asn Asp Met Leu Gln Phe Lys Ile Tyr Asp Pro Gln
 1025 1030 1035
 Lys Lys Arg Tyr Glu Val Pro Val Pro Leu Asn Ile Pro Thr Thr
 1040 1045 1050
 Pro Ile Ser Thr Tyr Glu Asp Arg Leu Tyr Asp Val Glu Ile Lys
 1055 1060 1065
 Glu Asn Pro Phe Gly Ile Gln Ile Arg Arg Arg Ser Ser Gly Arg
 1070 1075 1080
 Val Ile Trp Asp Ser Trp Leu Pro Gly Phe Ala Phe Asn Asp Gln

1085						1090						1095			
Phe	Ile	Gln	Ile	Ser	Thr	Arg	Leu	Pro	Ser	Glu	Tyr	Ile	Tyr	Gly	
1100						1105					1110				
Phe	Gly	Glu	Val	Glu	His	Thr	Ala	Phe	Lys	Arg	Asp	Leu	Asn	Trp	
1115						1120					1125				
Asn	Thr	Trp	Gly	Met	Phe	Thr	Arg	Asp	Gln	Pro	Pro	Gly	Tyr	Lys	
1130						1135					1140				
Leu	Asn	Ser	Tyr	Gly	Phe	His	Pro	Tyr	Tyr	Met	Ala	Leu	Glu	Glu	
1145						1150					1155				
Glu	Gly	Asn	Ala	His	Gly	Val	Phe	Leu	Leu	Asn	Ser	Asn	Ala	Met	
1160						1165					1170				
Asp	Val	Thr	Phe	Gln	Pro	Thr	Pro	Ala	Leu	Thr	Tyr	Arg	Thr	Val	
1175						1180					1185				
Gly	Gly	Ile	Leu	Asp	Phe	Tyr	Met	Phe	Leu	Gly	Pro	Thr	Pro	Gln	
1190						1195					1200				
Val	Ala	Thr	Lys	Gln	Tyr	His	Glu	Val	Ile	Gly	His	Pro	Val	Met	
1205						1210					1215				
Pro	Ala	Tyr	Trp	Ala	Leu	Gly	Phe	Gln	Leu	Cys	Arg	Tyr	Gly	Tyr	
1220						1225					1230				
Ala	Asn	Thr	Ser	Glu	Val	Arg	Glu	Leu	Tyr	Asp	Ala	Met	Val	Ala	
1235						1240					1245				
Ala	Asn	Ile	Pro	Tyr	Asp	Val	Gln	Tyr	Thr	Asp	Ile	Asp	Tyr	Met	
1250						1255					1260				
Glu	Arg	Gln	Leu	Asp	Phe	Thr	Ile	Gly	Glu	Ala	Phe	Gln	Asp	Leu	
1265						1270					1275				

Pro	Gln	Phe	Val	Asp	Lys	Ile	Arg	Gly	Glu	Gly	Met	Arg	Tyr	Ile
1280						1285					1290			
Ile	Ile	Leu	Asp	Pro	Ala	Ile	Ser	Gly	Asn	Glu	Thr	Lys	Thr	Tyr
1295						1300					1305			
Pro	Ala	Phe	Glu	Arg	Gly	Gln	Gln	Asn	Asp	Val	Phe	Val	Lys	Trp
1310						1315					1320			
Pro	Asn	Thr	Asn	Asp	Ile	Cys	Trp	Ala	Lys	Val	Trp	Pro	Asp	Leu
1325						1330					1335			
Pro	Asn	Ile	Thr	Ile	Asp	Lys	Thr	Leu	Thr	Glu	Asp	Glu	Ala	Val
1340						1345					1350			
Asn	Ala	Ser	Arg	Ala	His	Val	Ala	Phe	Pro	Asp	Phe	Phe	Arg	Thr
1355						1360					1365			
Ser	Thr	Ala	Glu	Trp	Trp	Ala	Arg	Glu	Ile	Val	Asp	Phe	Tyr	Asn
1370						1375					1380			
Glu	Lys	Met	Lys	Phe	Asp	Gly	Leu	Trp	Ile	Asp	Met	Asn	Glu	Pro
1385						1390					1395			
Ser	Ser	Phe	Val	Asn	Gly	Thr	Thr	Thr	Asn	Gln	Cys	Arg	Asn	Asp
1400						1405					1410			
Glu	Leu	Asn	Tyr	Pro	Pro	Tyr	Phe	Pro	Glu	Leu	Thr	Lys	Arg	Thr
1415						1420					1425			
Asp	Gly	Leu	His	Phe	Arg	Thr	Ile	Cys	Met	Glu	Ala	Glu	Gln	Ile
1430						1435					1440			
Leu	Ser	Asp	Gly	Thr	Ser	Val	Leu	His	Tyr	Asp	Val	His	Asn	Leu
1445						1450					1455			

Tyr	Gly	Trp	Ser	Gln	Met	Lys	Pro	Thr	His	Asp	Ala	Leu	Gln	Lys
1460						1465					1470			
Thr	Thr	Gly	Lys	Arg	Gly	Ile	Val	Ile	Ser	Arg	Ser	Thr	Tyr	Pro
1475						1480					1485			
Thr	Ser	Gly	Arg	Trp	Gly	Gly	His	Trp	Leu	Gly	Asp	Asn	Tyr	Ala
1490						1495					1500			
Arg	Trp	Asp	Asn	Met	Asp	Lys	Ser	Ile	Ile	Gly	Met	Met	Glu	Phe
1505						1510					1515			
Ser	Leu	Phe	Gly	Ile	Ser	Tyr	Thr	Gly	Ala	Asp	Ile	Cys	Gly	Phe
1520						1525					1530			
Phe	Asn	Asn	Ser	Glu	Tyr	His	Leu	Cys	Thr	Arg	Trp	Met	Gln	Leu
1535						1540					1545			
Gly	Ala	Phe	Tyr	Pro	Tyr	Ser	Arg	Asn	His	Asn	Ile	Ala	Asn	Thr
1550						1555					1560			
Arg	Arg	Gln	Asp	Pro	Ala	Ser	Trp	Asn	Glu	Thr	Phe	Ala	Glu	Met
1565						1570					1575			
Ser	Arg	Asn	Ile	Leu	Asn	Ile	Arg	Tyr	Thr	Leu	Leu	Pro	Tyr	Phe
1580						1585					1590			
Tyr	Thr	Gln	Met	His	Glu	Ile	His	Ala	Asn	Gly	Gly	Thr	Val	Ile
1595						1600					1605			
Arg	Pro	Leu	Leu	His	Glu	Phe	Phe	Asp	Glu	Lys	Pro	Thr	Trp	Asp
1610						1615					1620			
Ile	Phe	Lys	Gln	Phe	Leu	Trp	Gly	Pro	Ala	Phe	Met	Val	Thr	Pro
1625						1630					1635			

Val	Leu	Glu	Pro	Tyr	Val	Gln	Thr	Val	Asn	Ala	Tyr	Val	Pro	Asn
1640						1645					1650			
Ala	Arg	Trp	Phe	Asp	Tyr	His	Thr	Gly	Lys	Asp	Ile	Gly	Val	Arg
1655						1660					1665			
Gly	Gln	Phe	Gln	Thr	Phe	Asn	Ala	Ser	Tyr	Asp	Thr	Ile	Asn	Leu
1670						1675					1680			
His	Val	Arg	Gly	Gly	His	Ile	Leu	Pro	Cys	Gln	Glu	Pro	Ala	Gln
1685						1690					1695			
Asn	Thr	Phe	Tyr	Ser	Arg	Gln	Lys	His	Met	Lys	Leu	Ile	Val	Ala
1700						1705					1710			
Ala	Asp	Asp	Asn	Gln	Met	Ala	Gln	Gly	Ser	Leu	Phe	Trp	Asp	Asp
1715						1720					1725			
Gly	Glu	Ser	Ile	Asp	Thr	Tyr	Glu	Arg	Asp	Leu	Tyr	Leu	Ser	Val
1730						1735					1740			
Gln	Phe	Asn	Leu	Asn	Gln	Thr	Thr	Leu	Thr	Ser	Thr	Ile	Leu	Lys
1745						1750					1755			
Arg	Gly	Tyr	Ile	Asn	Lys	Ser	Glu	Thr	Arg	Leu	Gly	Ser	Leu	His
1760						1765					1770			
Val	Trp	Gly	Lys	Gly	Thr	Thr	Pro	Val	Asn	Ala	Val	Thr	Leu	Thr
1775						1780					1785			
Tyr	Asn	Gly	Asn	Lys	Asn	Ser	Leu	Pro	Phe	Asn	Glu	Asp	Thr	Thr
1790						1795					1800			
Asn	Met	Ile	Leu	Arg	Ile	Asp	Leu	Thr	Thr	His	Asn	Val	Thr	Leu
1805						1810					1815			
Glu	Glu	Pro	Ile	Glu	Ile	Asn	Trp	Ser						

1820

1825

<210> 72
 <211> 685
 <212> PRT
 <213> Artificial

<220>
 <223> D2H receptor

<400> 72

Met Ala Glu Asp Lys Ser Lys Arg Asp Ser Ile Glu Met Ser Met Lys
 1 5 10 15

Gly Cys Gln Thr Asn Asn Gly Phe Val His Asn Glu Asp Ile Leu Glu
 20 25 30

Gln Thr Pro Asp Pro Gly Ser Ser Thr Asp Asn Leu Lys His Ser Thr
 35 40 45

Arg Gly Ile Leu Gly Ser Gln Glu Pro Asp Phe Lys Gly Val Gln Pro
 50 55 60

Tyr Ala Gly Met Pro Lys Glu Val Leu Phe Gln Phe Ser Gly Gln Ala
 65 70 75 80

Arg Tyr Arg Ile Pro Arg Glu Ile Leu Phe Trp Leu Thr Val Ala Ser
 85 90 95

Val Leu Val Leu Ile Ala Ala Thr Ile Ala Ile Ile Ala Leu Ser Pro
 100 105 110

Lys Cys Leu Asp Trp Trp Gln Glu Gly Pro Met Tyr Gln Ile Tyr Pro
 115 120 125

Arg Ser Phe Lys Asp Ser Asn Lys Asp Gly Asn Gly Asp Leu Lys Gly
 130 135 140

Ile Gln Asp Lys Leu Asp Tyr Ile Thr Ala Leu Asn Ile Lys Thr Val
145 150 155 160

Trp Ile Thr Ser Phe Tyr Lys Ser Ser Leu Lys Asp Phe Arg Tyr Gly
165 170 175

Val Glu Asp Phe Arg Glu Val Asp Pro Ile Phe Gly Thr Met Glu Asp
180 185 190

Phe Glu Asn Leu Val Ala Ala Ile His Asp Lys Gly Leu Lys Leu Ile
195 200 205

Ile Asp Phe Ile Pro Asn His Thr Ser Asp Lys His Ile Trp Phe Gln
210 215 220

Leu Ser Arg Thr Arg Thr Gly Lys Tyr Thr Asp Tyr Tyr Ile Trp His
225 230 235 240

Asp Cys Thr His Glu Asn Gly Lys Thr Ile Pro Pro Asn Asn Trp Leu
245 250 255

Ser Val Tyr Gly Asn Ser Ser Trp His Phe Asp Glu Val Arg Asn Gln
260 265 270

Cys Tyr Phe His Gln Phe Met Lys Glu Gln Pro Asp Leu Asn Phe Arg
275 280 285

Asn Pro Asp Val Gln Glu Glu Ile Lys Glu Ile Leu Arg Phe Trp Leu
290 295 300

Thr Lys Gly Val Asp Gly Phe Ser Leu Asp Ala Val Lys Phe Leu Leu
305 310 315 320

Glu Ala Lys His Leu Arg Asp Glu Ile Gln Val Asn Lys Thr Gln Ile
325 330 335

Pro Asp Thr Val Thr Gln Tyr Ser Glu Leu Tyr His Asp Phe Thr Thr

Pro Arg Ser Ala Leu Lys Leu Tyr Gln Asp Leu Ser Leu Leu His Ala
545 550 555 560

Asn Glu Leu Leu Leu Asn Arg Gly Trp Phe Cys His Leu Arg Asn Asp
565 570 575

Ser His Tyr Val Val Tyr Thr Arg Glu Leu Asp Gly Ile Asp Arg Ile
580 585 590

Phe Ile Val Val Leu Asn Phe Gly Glu Ser Thr Leu Leu Asn Leu His
595 600 605

Asn Met Ile Ser Gly Leu Pro Ala Lys Ile Arg Ile Arg Leu Ser Thr
610 615 620

Asn Ser Ala Asp Lys Gly Ser Lys Val Asp Thr Ser Gly Ile Phe Leu
625 630 635 640

Asp Lys Gly Glu Gly Leu Ile Phe Glu His Asn Thr Lys Asn Leu Leu
645 650 655

His Arg Gln Thr Ala Phe Arg Asp Arg Cys Phe Val Ser Asn Arg Ala
660 665 670

Cys Tyr Ser Ser Val Leu Asn Ile Leu Tyr Thr Ser Cys
675 680 685

<210> 73

<211> 11

<212> PRT

<213> Artificial

<220>

<223> binding 11 mer fragment L-form

<220>

<221> MISC_FEATURE

<222> (1)..(1)

<223> "X=S or T"

<220>

<221> MISC_FEATURE

<222> (3)..(3)

<223> "X= R or K"

<220>

<221> MISC_FEATURE

<222> (4)..(4)

<223> "X= K or R"

<220>

<221> MISC_FEATURE

<222> (6)..(6)

<223> "X= S or L"

<220>

<221> MISC_FEATURE

<222> (7)..(7)

<223> "X= R,I,V or S "

<220>

<221> MISC_FEATURE

<222> (8)..(8)

<223> "X= S, Y, F, or H "

<220>

<221> MISC_FEATURE

<222> (10)..(10)

<223> "X=F, H or R "

<400> 73

Xaa Thr Xaa Xaa Ser Xaa Xaa Xaa Asn Xaa Arg
1 5 10

<210> 74

<211> 8

<212> PRT

<213> Artificial

<220>
<223> binding 8 mer fragment L-form

<220>
<221> MISC_FEATURE
<222> (2)..(2)
<223> "X=S,A or G"

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> "X=V or Q"

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> "X = P, G or S"

<220>
<221> MISC_FEATURE
<222> (8)..(8)
<223> "X = W or Y"

<400> 74

Asp Xaa Asp Xaa Arg Arg Xaa Xaa
1 5

<210> 75
<211> 10
<212> PRT
<213> Artificial

<220>
<223> binding 10 mer fragment L-form

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> "X = A or F"

<220>

<221> MISC_FEATURE
<222> (8)..(8)
<223> "X = R or H"

<400> 75

Val Arg Ser Gly Cys Gly Xaa Xaa Ser Ser
1 5 10

<210> 76
<211> 11
<212> PRT
<213> Artificial

<220>
<223> binding 11 mer fragment L-form

<400> 76

Asn Thr Arg Lys Ser Ser Arg Ser Asn Pro Arg
1 5 10

<210> 77
<211> 11
<212> PRT
<213> Artificial

<220>
<223> binding 11 mer fragment L-form

<400> 77

Ser Thr Lys Arg Ser Leu Ile Tyr Asn His Arg
1 5 10

<210> 78
<211> 10
<212> PRT
<213> Artificial

<220>
<223> binding 10 mer fragment L-form

<400> 78

Ser Thr Gly Arg Lys Val Phe Asn Arg Arg
1 5 10

<210> 79
<211> 11
<212> PRT
<213> Artificial

<220>
<223> binding 11 mer fragment L-form

<400> 79

Thr Asn Ala Lys His Ser Ser His Asn Arg Arg
1 5 10

<210> 80
<211> 8
<212> PRT
<213> Artificial

<220>
<223> binding 8 mer fragment L-form

<400> 80

Asp Ser Asp Val Arg Arg Pro Trp
1 5

<210> 81
<211> 8
<212> PRT
<213> Artificial

<220>
<223> binding 8 mer fragment L-form

<400> 81

Ala Ala Asp Gln Arg Arg Gly Trp
1 5

<210> 82
<211> 8
<212> PRT

<213> Artificial

<220>

<223> binding 8 mer fragment L-form

<400> 82

Asp Gly Arg Gly Gly Arg Ser Tyr

1

5

<210> 83

<211> 4

<212> PRT

<213> Artificial

<220>

<223> binding 4 mer fragment L-form

<400> 83

Arg Val Arg Ser

1

<210> 84

<211> 12

<212> PRT

<213> Artificial

<220>

<223> binding 12 mer fragment L-form

<400> 84

Ser Val Arg Ser Gly Cys Gly Phe Arg Gly Ser Ser

1

5

10

<210> 85

<211> 11

<212> PRT

<213> Artificial

<220>

<223> binding 11 mer fragment L-form

<400> 85

Ser Val Arg Gly Gly Cys Gly Ala His Ser Ser
1 5 10